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Food sovereignty and territory: the domestic production unit as a basic premise

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Abstract

While in the current economic model problems of poverty and hunger are still not resolved, in Mexico there are about 63 million people (CONEVAL, 2014), public policies should aim to strengthen the production units which, by their economic and organizational nature, they are more likely to produce cheap food for local final consumers and the same housed units allow reproduction of a huge population. In this article, it is exposed the progress of the research entitled Domestic production unit on food sovereignty: case study of localities with highest level of rurality in Jalisco, guided by the overall objective of generating information on domestic unit of production to assist in the development of a theoretical model that provides indicators on how to achieve food sovereignty in Mexico. This research is based on the hypothesis that strengthening the domestic unit of production is the basic premise to achieve food sovereignty. In this article results are shown of analysis of the relationship between the domestic unit of production and food sovereignty, to determine the conceptual criteria, their variables and indicators to develop tools and instruments methodological basis necessary to obtain the data for analysis, diagnosis and generation of information: results of analysis the existing theory and interviews with 38 domestic unit of production located in two municipalities with high rurality, Cuquío and San Cristóbal de la Barranca, located in the Central region of Jalisco, México.

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1. Food sovereignty: from food security to flexible and planned food self-sufficiency

The problem of rural development and income generation in the country has to do with the actual existence of a quarter of Mexico's population living in the countryside and whose way of producing and reproducing their existence, hence their culture, is fundamentally peasant. Public policies aimed for this sector from the decade of the seventies have weakened and unstructured production intended for domestic market, a situation that has accelerated the process of impoverishment in rural areas. In the current economic situation there is insufficient alternative employment in other areas of the economy for this sector of the population, nor the conditions for the use and development of their productive capacities in rural areas. Before the accelerated impoverishment process of most of the world's population in the last two decades, its highest expression is a critical reduction of the minimum recommended food intake for reproduction of people, that is the so-called food crisis (since no reduced food production is registered but reduced food purchasing power by impoverished final consumers), it has been initiated the reflection on new models of economic development alternate to the world order. From which this questions follow, how to achieve food sovereignty? Given the current economic context, how can people with little ability to purchase food ensure access to it?

At the World Food Summit held in 1996, it was agreed that food security exists when all people, permanently, physical, social and economic access to sufficient, safe and nutritious food to meet their daily energy needs and food preferences for an active and healthy life (FAO, 2011). However, the argument of the model in not considering the specificity of the internal contexts of each country in development or underdevelopment, not anticipated that the food supply cannot ensure safe and nutritious products since the policy of liberalization of the market has eliminated the planning function of the State; similarly, the economic and physical access to food supplies on the part of households is not assured with strategies of poles of economic investment based on the comparative advantages of cheap labor, required by international agencies and by States materialized premises; also, the standardization of the diet and the creation of food needs will never set conditions for a good use Of the food as it does not lead to diversity in diet or good health practices; finally, the rhetoric of international agencies such as FAO, UN, Inter-American Development Bank, IMF, have not been able to dovetail, because while one promulgates the food security other requires that workers devaluate in the economic cycle.

Within the advocacy of food security model by international financial agencies, the concept of self-sufficiency in food is biased to its economic function, this is, what percentage of a GDP is geared to meeting the food needs of its population, reaching when you are satisfied with their own production without the need to resort to imports; is usually measured by the rate of self-sufficiency, i.e. the degree of contribution of the national production to the domestic consumption total, excluding changes in inventories (Thomson & Metz, 1999). The function of sovereignty as independence, power and freedom is excluded from the argumentation. Such bias has proved in practice direct negative effects on national security and governance. It is worth mentioning that on the basis of these speeches, called the virtuous circle of development, also handled by the same international agencies, could not materialize. Examples of food self-sufficiency, in where they integrate the economic dimensions, independence, power and freedom, as an effective strategy for socio-economic development, are known in the Republic of China where the order has always been the preservation of national independence in the provision of basic foodstuffs, currently highlighted the following characteristics in their strategies (Rodríguez, 2010). That is why the food sovereignty is argued as an alternative model of peasant organizations to food security model developed by the FAO; which integrates the productive capacities of the peasant agriculture, sustainable management of resources and the protection of the State with policies that ensure access to food that is culturally preserved.

2. Conditions that directed toward the loss of food sovereignty in Mexico

From 1982 to 1994 the agricultural sector in Mexico goes into crisis, due to the decline of the general profitability of agricultural investments and the drastic reduction of state participation in the sector, which led to a sharp decline in public investment in irrigation, agricultural development and rural credit, which had been a pillar to encourage investment and to foster the accumulation in the field in the previous decades. In the new model, to agriculture is assigned the main function of exchange earner; for what is determined as strategic or priority only that market-oriented production outside and eminently business, such as vegetables, fruits, flowers and the export of cattle. This has resulted

in an increase without precedent in agricultural imports and in the decrease of supply for the internal market. In such a way that national production destined to the domestic market (which excludes exports) measured in terms of per capita provision, i.e. the apparent national consumption, has had a significant decline. The result of this behavior of the agricultural and forestry production has been a deficit that has been covered with increasing imports. So, however, the severe decrease in consumption by the poorest sectors of the population, agricultural imports and food that in 1982 were 1,790 million dollars (mdd), is shot in the next decade to reach 6,181 million dollars in 1992 and to 8,601 million dollars in 1999. The agri-food trade balance, tends to be increasingly negative for Mexico. In 1982 its deficit was 276 million and for 2000 reached 1.572 mdd. It is of the utmost importance to size the economic dynamic-population of the field, for the year 2000 the agricultural gross domestic product represented only 4 percent of the national total; and yet, in this sector worked a fifth part of the active population national and lived a fourth part of the inhabitants of the country. What proves, not the low productivity of the sector, as various authors point, but the enormous capacity of absorption, retention and maintenance of the population by the agro. Although the very high cost of that almost 55 percent of the rural population live in conditions of poverty or extreme poverty (Morett & Cosío, 2015).

On the basis of the Agricultural Census (INEGI, 2007), it is estimated that in the Mexican countryside production of 4,067,618 units provide livelihoods permanently 15,822,547 people. In the units of production generates employment for 1,638,085 persons (approximately an employment rate of 0.28); this figure multiplied by the average ratio of economic dependence, 2.71 represents the maintenance of 4,439,210 people, which combined with the 15,822,547 people members of domestic units of production, give a total of 20,261,757 people, which shows that almost one fifth of the population of Mexico lives in rural areas and is kept of the farming and forestry. Quarterly revenues available per production unit owned by households are on average 14,900 pesos, same that are only able to cover 60 percent of the basic food basket (foodstuffs considered basic in an official way) consumed in the same period; it means that if the home is built on average by 4 people, only covers the livelihoods of 2.4 people, even when the producer owner has an economic dependence of 2.71 people. This situation demonstrates a food poverty in rural areas and a weakening of food sovereignty, understanding it as food self-sufficiency.

3. Uneven development and heterogeneous in the productive systems in rural Mexico

Due to its geographical characteristics and historical development, the agricultural sector in Mexico is not homogeneous within the socioeconomic structure is divided into two main areas: management system agribusiness (capitalism and modern) and the peasant farming system (simple commodity production). These systems respond to different conditions of production and reproduction, which are the result of the form of social organization of production, the quantity and quality of exploitable resources in the territory (the size of the production unit, water availability and access to productive and income) entries, the location of the agro-ecological zones and socio-economic diversity, infrastructure production units, characteristics and demographic conditions, the orientation of production, among other factors affecting productivity, profitability and competitiveness, which partly determines their economic and social viability.

Among the factors that affect the production and reproduction of the different productive systems, existing in the Mexican agro, we can point out the following indicators: degradation of natural resources by technical factors, economic and political; poor infrastructure in production units; demographic problems, imbalance on the revenues and expenditures of households in the agricultural production units; imprecision of the productivity of the primary sector arising from the vagueness of the concept of the rural; decline in the profitability of the agricultural activity due to the following variables -there are no guaranteed prices, limited or no access to credit, government supports are oriented to the commercial farmers (which are the minority). Leading to a greater polarization between commercial farmers (rich) and subsistence farmers (the majority and increasingly poor).

4. The municipalities with the highest level of rurality in Jalisco, Mexico

In Jalisco 11.2 percent of the municipalities are considered high rurality, based on the highest index of the population employed in the primary sector; population in localities under 2,500 inhabitants; and municipal surface with use of agriculture and forestry. These municipalities are nestled in regions with the use of the soil and vegetation

type different, same that configure various rural landscapes: San Cristóbal de La Barranca, Casimiro Castillo, Cuautitlán de García Barragán, La Huerta, Villa Purificación, Ejutla, Tuxcacuesco, Guachinango, Mixtlán, Techaluta de Montenegro, Tolimán, Jilotlán de los Dolores and Santa Maria del Oro

For the period 2000-2011, in these municipalities the maize, one of the major staple crops, presented a decrease in its area sown and in its value a rise; crops with agro-industrial destinations presented a decrease. Situation that involves increased spending on consumables, increasing the loss of food sovereignty.

5. Food sovereignty, territory and domestic unit of production: a holistic approach

5.1. Food sovereignty

Considering that size of territory, people and power merge dialectically in the concept of sovereignty, we will begin to treat this concept not only as food availability (such as the concept of food security implemented by FAO) but also to the form of producing them and its origin, as this predisposes the form of reproduction and survival of domestic production units (the producer, his family and his own production unit itself) local agricultural, in the economic cycle of production-distribution. Depending on the production system, territorial conditions are created so that food is produced using sustainable supplies and moving so that final consumers (including the families of local direct producers) have access to these continuously, that is, having purchasing power. Therefore, in the concept of food sovereignty, endogeneity must be a constitutive category, understood as the ability of local population to exploit sustainably the potential resources, both natural and human, contained in its territory (Vazquez, 2000; González, 2002; Cosío, 2015b). Capacity obtained from the way of organization to produce, consume and reproduce within domestic production units (Meillassoux, 1977; Lumberras, 1974), same organization grants power to decide, and that is sovereignty.

Before the question, how to achieve food sovereignty?, the solution should focus on the essence of the problem, not on its effects, projecting that the macroeconomic environment continues without major changes, there should be in that part of the economy that simply reproduces and is still preserved in the current context. Such simple commodity economy (Marx, 1980; Contreras, 1976; Fujii, 1984) has features that allow adaptability and flexibility in the organization of production, that attach them to the high degree of endogeneity of domestic production units (Morett & Cosío, 2013), allowed themselves to a) diversify production, b) have multiple jobs, c) produce and reproduce at local scales, d) increase resilience, autonomy and empowerment, e) apply practical cooperative and supportive, f) benefit from resources, of all types, content in local and regional production systems. Also, because of its adaptability and flexibility to organize and use of their own resources contained in domestic production units and local production systems of which they are part (Cosío, 2015a) may, within its diversification of productive activities, ponder some of them as the surrounding context; so, they should not necessarily focus exclusively on agricultural activities, but look for options, based on own resources and local knowledge, in other alternative activities such as ecological tourism, handicraft production, collection and processing plants and local herbs and/ or simply services that have demand in the locality. Such activities could be more viable if government policies supporting the country were opened to them and not limiting to agricultural activities (Pinto, 2013), as in most of the world's rural areas.

5.2. The Region

The territory is conceived as a spatially constituted historical social formation, which functions as a complex system where the dimensions of life of the society are interrelated: natural, economic, political and cultural. The potential of natural resources and the ability to work with their production conditions to exploit them, are structuring various forms of social organization. These society organizations located in certain areas, which are part of the capitalist world system, are identified as regions; the globalization process to internationalize markets, consumption patterns, technology, communications and production, excludes the population engaged in traditional activities and the primary sector with domestic destination, organized a market economy based on simple production (Ortegón, 2000).

5.2.1. Regional inequality: of the accumulation to the uneven development

Uneven development is the effect of a historical process of the social relations of production and the productive forces, assuming both sectoral and territorially. In addition, the various forms of occupation, use and exploitation of natural resources and territorial changes in agricultural structures have developed a diverse agriculture. Reflecting on food sovereignty invariably the notion of development and its heterogeneous expression in rural areas stands. In the last decades the theoretical explanation for this regional inequality has focused on the spatial division of labor in the territory is the result of the characteristics (historically determined) of the production process to the specificity of each region; and new processes of restructuring the global economic system have unequal regional effect in Mexico, as they tend to consolidate those areas with the greatest international integration. This situation undoubtedly deepened the uneven development to the extent of jeopardizing food sovereignty within an environment marginalization, poverty and disintegration of rural society; however, the theoretical argument fails to explain how to solve these problems as it remains focused on production rather considering ways of organizing production based on endogenous resources. Such heterogeneity of production systems in rural areas, determines the conditions of production and therefore the strategies of the various producers in response to their particular problems. This situation creates the need for the existence and implementation of differentiated policies in strategic planning processes national: programs and projects to generate a process of transformation of rural societies and asymmetrical relations, which have as their starting point the micro region.

5.2.2. The micro region and the local production system

The effects of uneven development in rural areas manifest themselves, in short, as poverty in peasants (that has worsened due to the loss of food sovereignty). This situation has been addressed by governments or parastatal institutions, from an approach where confuse rural development as productive or social programs and not based on the conditions of existence and subordination of farmers in society, separating this situation reproduction economic, political and cultural life of society, so it is necessary to link the analysis and diagnosis of macroeconomic cut with microeconomic cut to promote changes that lead to the transformation of the current conditions of production and reproduction that the global economy imposes on society and the rural peasantry. Considering that rural development is a social process, strategies for overcoming poverty in the rural sector must necessarily start from a theoretical approach to change and development, which are considered simultaneously reproductive mechanisms such as transformation, to attack the causes of poverty and its effects not only attack (Plaza, 1998). It is in the micro region or local society, understanding it as the minimum set of relationships and spatially established social institutions, where the interaction between a social system and a natural physical space, with its specific agro-ecological characteristics that condition production possibilities, allowing to understand the reproduction and production of rural and farm families that form, as well as the operation of power distribution and appropriation of resources contained in that space.

Based in a theory of change that serves to identify processes, impacts and indicators: what is what changes? what is change? how? when? where? why? for what? and with what? With a methodological framework where it is taken as a unit of study to the micro-region and content production systems in this; and as a unit of analysis to domestic production unit (Plaza, 1998; Morett & Cosío, 2013). Which provide information on priorities, specific needs and potential for development or change. This change should materialize in local production systems (SPL), understanding them as chaining processes complementary production located in the same region characterized by using know how (Bellandi, 1996) and cultural - socioeconomic environment, which reproduces relations that make possible the division of labor and production (Becattini & Rullani, 1996). These production processes are interconnected and interdependent, forming micro-regions which by its agricultural and industrial complementary nature, participate in the general dynamics of the space.

The importance of the LPS in the analysis of food sovereignty and territory, is based on the existence of evidence (Alonso, 2012; Cosío, 2015) that in regions where there are companies (be they agricultural or processing both artisanal as manufacturing/industrial) grouped in a local production system, they take competitive advantage that increases their resilience in adverse macroeconomic contexts, because in the SPL (Cividanes, 2000) is a blending of specialized productive units, networks of productive complementarity, solidarity and collaboration and the local labor market.

5.3. *The domestic production unit (DPU): production, consumption and reproduction*

The domestic production unit (DPU) Consideration should be given to basic premise in the argument of the food sovereignty; understanding it as the unit of production, consumption, and reproduction of the producer owner and the members of the same, that in addition to his family joined the collaborators with any affinity (friendship, cronyism, etc.), casual workers and permanent. Thus, the domestic unit breaks the boundaries of the main activity in the productive unit, to express themselves productively in other areas of the economy that will return income that will allow their reproduction as DPU with a central activity or rector (agriculture, crafts, and livestock, mining). This diversification of its members generates flexibility and adaptability to changes in the environment.

The concept domestic unit not only conceived as a producer of goods but also as a producer of consumer goods, both by its members and by the economic unit itself: tangible and intangible goods (inputs, means of production, know-how (knowledge inherited generationally) and forms of organization, cooperation and reciprocity, among others); and within that process, as the same breeding unit. Due to its characteristics, knowledge or expertise of cultural work within the DPU is one hundred percent acquired pragmatic and generationally, so that the division of labor to projected future reproduction as DPU and therefore their livelihoods. It is also conceives the DPU as the basic cell of Local Productive System (LPS); within the micro-regions, households productively production chain the LPS. The more diversification of productive activities are carried out by these larger DPU is its flexibility and adaptability to the changing economic environment, as it will be for the same system (Alonso, 2012; Cosío, 2015), considering a diversification as "desirable for the survival of the LPS option since they have more options to adapt to new situations that specialized in a single branch of products." (Alonso, 2012: 241).

6. Operationalization of the variables for the generation of indicators

To operationalize the variables of the theoretical model of food sovereignty that is developing, must obtain indicators through case studies (i.e. specific territories) to learn how to provide economic conditions, natural and social to assist States in food self-sufficiency, in local production systems well integrated in the empowerment of producers through the organization that gives them strength and effectiveness in the management, on the combination of the cultural knowledge and innovation specific to the territory in the strengthening of the endogeneity through sustainable practices and administrations of the resources, in the formation of networks to pursue the common good. Thus, the analysis of domestic units of production as a resource to achieve food sovereignty will depart from five conceptual approaches: (a) food self-sufficiency, b) the local production systems, (c) the empowerment of the direct producers, d) Pluriactivity and (e) the endogeneity. The developed model could provide indicators for decision-making in the elaboration of public policies and their corresponding programs of development; local development projects stemming from the programs met the regionalized indicators by priority level. The strategies promoted scheduled of the theoretical approach proposed, which integrates the following criteria with their variables and indicators: a) How to organize for the job: participation of the owner of the production unit in work not only of administration, organization and monitoring; relatives of the producer participating in the activity without salary; relatives of the producer participating in the activity with a wage; permanent staff; staff recruited eventual; division of labor. b) Pluriactivity: number of family members who work outside of the production unit that generate income; productive reinvestment of income earned outside the production unit; income earned outside the production unit by other work. c) Financing. d) Productive capacity of the labor force: index of economic dependence; activity rate. e) Production System: daily production volume; direct marketing of the product; volume sold per day; amount of means of production, coverage of the means of production; surface of the production unit; technological level of the production unit; own production of inputs and raw materials; technological level of the facilities and equipment own; linking to the market. f) Organization for production: level of organization.

7. Criteria, variables and indicators for the analysis of the domestic unit of production on food sovereignty: case study in San Cristóbal de la Barranca and Cuquío in Jalisco, Mexico

Here are the data obtained from the pilot survey applied in the municipalities of Cuquío and San Cristóbal de la Barranca, state of Jalisco.

7.1. Local production system

In the surveyed municipalities, the DPU have their production units generally located 4.9 kilometers from the home of producer and its average area is 9 hectares divided into 2.5 parts. Of the total DPU, 87.5 percent do not irrigate; due to the falling prices of white maize and to the increase in input costs, 75 percent whose main activity is the production of forage maize for their own consumption shackled to the production of dual-purpose cattle (10-80 heads won); even when they have a territorial potential for forestry, the activity is not significant. For decades he has specialized in the production of white corn, however, in the decade of the nineties added to their activity growing agave bound distilleries local tequila, near the region.

7.2. Endogeneity

7.2.1. How to organize for work

How to organize for the work of the DPU is totally familiar half of respondents; 25 percent form is individual, ie, only the owner producer works; and 25 percent, in addition to the family, hires temporary workers. 85 percent of the family is working or participating in a work process: half are men and 14.7 percent are women; and 35.3 percent are temporary workers. Within the division of labor, godfather are very important as they are not permanent or occasional workers who receive payment, but compensate for their involvement with some benefit or advantage, as an example, milking, clean godfather and feed livestock, and in return receives permission to take the little corn and stubble left after harvest of corn. Since 2005 there has been a process of dividing property among family members, which led to a reduction in the area sown by producer and a major problem to have family labor at no cost.

7.2.2. Productive capacity of the workforce

On average live 5 people in the shelter of the producer, of which 97.5 percent have kinship. The distribution by gender is charged in 60 percent to men. The Ages of the members of the DPU is distributed as follows: 15 percent are under the age of 12 years; 20 percent of 12 to 18 years; 60 per cent of 18 to 60 years; and 10 percent more than 60 years. Of the total number of people living in the dwelling of the producer 27.5 percent performed outside the unit other activities of the agriculture, livestock and forestry; and 7.5 percent deals in services activities; this is 35 percent, a third of the members of the DPU gets revenue outside of its productive unit.

7.2.3. Cultural know-how

Due to its characteristics, knowledge or know-how of the cultural work within the DPU is one hundred percent pragmatic and acquired from generation to generation, is why the division of labor into the future reproduction as DPU and therefore, their livelihood. In the pilot survey it was found that most of the work processes of each production cycle lies with the owner of the producer, since 62.5 percent of farmers prepare the land, 75 percent planting, 87.5 percent spud, 87.5 percent fertilizes, 75 percent applied agrochemicals, 50 percent harvest; 43 percent milked; 50 percent conducts grazing their cattle; 62.5 percent clean and feed their cattle; 25 percent performed some sporadic activity logging; 12.5 percent makes wood cuts; 37.5 percent fishing; 25 percent performed processing activities (drying, dehydrating, stripping, threshing, etc.); 37.5 percent is maintained by its wire fences as a product of livestock. All these activities involve full time throughout the year, hiring someone to replace him would represent a cost of 30 thousand five hundred pesos on average.

Conclusions

To solve the problems of food poverty is a need food sovereignty model supported by the endogenous development of local territories. The definition of food sovereignty gives various concepts and categories that may constitute an

alternative to food security model: food self-sufficiency, local production systems, training of direct producers, cultural knowledge and endogenous character.

Faced with the question of how to achieve food sovereignty? the solution must be sought in the domestic units of production because they constitute the largest part of the productive units in the rural environment, because their characteristics of adaptability and flexibility in the productive organization, to join the high degree of endogeneity of the DPU, allows them to themselves to a) diversify their production, b) have pluriactivity, c) produce and reproduce at local scales, d) increase the resilience, autonomy and empowerment, e) apply cooperative practices and solidarity, f) to take advantage of the resources of all kinds, contained in local productive systems and regional.

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